

Thank you for the opportunity to respond to various comments posted on the EPA web site relative to **Draft 2** product specification (Version 3.0) for ENERGY STAR qualified exit signs.

Lithonia statement: *“Now EPA is proposing to drop all minimum luminance requirements and simply require the exit sign to be listed to UL 924 which also has no minimum luminance requirements”.*

Response: The statement that UL 924 has no minimum luminance requirements is simply not true. Section 40.1.3 requires that exit signs be tested either by an observation visibility test or an analytical test. Both tests establish minimum pass/fail criteria that insure a minimum level of visibility and legibility performance. Observation visibility tests have been a valid UL 924 test method for more than a decade. Table 40.6 is titled “Minimum luminance and uniformity”. The truth is that UL 924 has minimum luminance requirements.

Also, the statement that test observers must have minimum 24/40 visual acuity is also not true. Section 40.1.2 requires a minimum of 20/40 visual acuity, the same minimum visual acuity required for driving an automobile throughout most of the United States. All of the model building codes in this nation recognize that people with visual impairments may not be able to read signs and therefore require tactile and Braille signs as required by Title III of the Americans with Disabilities Act, Public Law 101-336.

NFPA and Underwriters Laboratories have established minimum performance requirements for exit signs after a thorough review of all facts and information provided. It is unfortunate that Lithonia feels compelled to impugn the competence of the most famous and respected test laboratory in the world, Underwriters Laboratories, as well as the competence of the thousands of building and fire officials of this nation who establish the minimum performance criteria for exit signs.

Lithonia statement: *“We strongly disagree with dropping minimum luminance requirements.”*

Response: This statement is misleading. EPA has chosen to incorporate the performance requirements of UL 924 and NFPA 101, Life Safety Code into the Energy Star minimum requirements. This is in keeping with the nationally recognized role that both of these organizations play in establishing minimum fire and life safety requirements.

Lithonia statement: *“You are proposing to drop the requirement that an exit sign must contain an integral light source. This complicates the inspection authority’s job because when a photoluminescent (PL) sign is used, he must try to make sure that adequate light for charging the PL sign is provided.”*

Response: Evidently, Lithonia is not aware that inspection authorities must also insure that all the electrical, mechanical, plumbing, fire alarm and sprinkler systems must also be installed correctly in accordance with dozens of applicable codes. Certainly, asking the installer to verify the minimum required ambient light is not that complicated a task.

NEMA statement: *“NFPA 101, Life Safety Code, and the related standard UL 924, Emergency Lighting and Power Equipment, have eliminated minimum illuminance requirements for exit signs raising serious concerns for the prompt and safe egress from building environments in case of an emergency.”*

Response: This statement is not true. UL 924, Section 40.1.3 requires that exit signs be tested either by an observation visibility test or an analytical test. Both tests establish minimum pass/fail criteria that insure a minimum level of visibility and legibility performance. Observation visibility tests have been a valid UL 924 test method for more than a decade. UL 924, Table 40.6 is titled “Minimum luminance and uniformity”. The truth is that UL 924 has minimum luminance requirements and NFPA 101, Life Safety Code adopts UL 924.

NEMA statement: Nema provides a brightness comparison of exit signs and concludes *“The exit sign brightness testing conducted for NEMA indicated a tremendous disparity in brightness between exit sign technologies.”*

Response: The NEMA report fails to understand that the role of model building codes and standards is not to establish the most stringent level of safety but to establish a minimum level of safety. NFPA and Underwriters Laboratories have established minimum performance requirements for exit signs after a thorough review of all facts and information provided. It is unfortunate that NEMA feels compelled to impugn the competence of the most famous and respected test laboratory in the world, Underwriters Laboratories, as well as the competence of the thousands of building and fire officials of this nation who establish the minimum performance criteria for exit signs.

NEMA statement: *“Dr. Collins concludes that a minimum level of 10 cd/m² is required for reasonable visibility in both clear and smoky conditions.”*

Response: The research conducted by Dr. Collins was based on artificially produced smoke with observers standing outside of and protected from the smoke area. This, by no stretch of the imagination, duplicates real fire ground conditions where people’s eyes and lungs are exposed to real toxic irritating fire smoke.

For this reason, all of the model building and fire codes provide for the placement of floor-level exit signs visible beneath the smoke when smoke is expected to be a problem in the exiting system. One need only look at the video footage of the recent night club fire in Rhode Island to understand that visibility of high level exit signs through fire smoke is typically not humanly possible.

NEMA statement: NEMA states that the Occupational, Safety, and Health Administration still requires a minimum luminance of 8.6 cd/m² for internally illuminated exit signs.

Response: This statement is not true. OSHA Section 1910.35 states “An employer who demonstrates compliance with the exit route provisions of NFPA 101–2000, the Life Safety

Code, will be deemed to be in compliance with the corresponding requirements in §§ 1910.34, 1910.36, and 1910.37.” NFPA 101-2000, Life Safety Code adopts UL 924.

Lighting Research Center statement: *“The revised version has scrapped all these measurements, adopting a UL listing as sufficient to ensure good visibility. This is disappointment because the UL requirements are no guarantee of good visibility.”*

Response: Lighting Research Center appears to be misinformed regarding the purpose of UL 924. It is not to guarantee the good visibility of exit signs but to test exit signs in accordance with established minimum safety performance standards.

The UL process takes into consideration a survey of known existing standards and the needs and opinions of a wide variety of interests concerned with the subject matter of the standard. Manufacturers, consumers, individuals associated with consumer-oriented organizations, academicians, government officials, industrial and commercial users, inspection authorities, insurance interests and others provide input to UL in the formulating of UL Standards for Safety.

Lighting Research Center statement: *“Specifically, the UL requirements, as does the revised Energy Star specification, allow low luminance exit signs, such as photoluminescent and radioluminescent signs, to be used. It is well established that these signs will become invisible in a smoke at a much lower smoke density than will exit signs with higher luminances. It may be convenient for the industry to have only one standard to meet but I had hoped that the EPA would show more concern for the safety of the user and would not show the same shameful willingness to ignore the effects of smoke on exit sign visibility that UL does.”*

Response: What is well established is that all exit signs will become invisible in a typical fire as smoke stacks from the top downward. Accordingly, all of the model building and fire codes provide for the placement of floor-level exit signs visible beneath the smoke when smoke is expected to be a problem in the exiting system. One need only look at the video footage of the recent night club fire in Rhode Island to understand that visibility of high level exit signs through fire smoke is typically not humanly possible.

It is unfortunate that the Lighting Research Center feels compelled to impugn the competence of the most famous and respected test laboratory in the world, Underwriters Laboratories, as well as the competence of the thousands of building and fire officials of this nation who establish the minimum performance criteria for exit signs.

Lighting Research Center statement: *“Again, the revised specification is an abandonment of what really matters about an exit sign, i.e., its visibility.”*

Response: The only truth in that statement is that what really matters about an exit sign is its’ visibility. EPA has not abandoned that concept but has merely entrusted that responsibility to the model code and standards organizations like the National Fire Protection Association and Underwriters Laboratories. I hope

that the Lighting Research Center will quit throwing rocks at UL and NFPA and be more professional in its' demeanor and public responses.

Manny Muniz Associates, LLC
8622 Gaines Ave.
Orangevale, CA 95662
(916) 989-3193 Phone
(916) 989-1493 Fax
(916) 955-4453 Cell
mannymuniz@hotmail.com
www.mannymunizassociates.com

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